

REMARKS

Claims 26-33, as amended, and new claims 41-54 are pending in this application. In this Response, Applicants have amended certain claims because Applicants believe these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicants respectfully submit that the claim amendments do not limit the range of any permissible equivalents.

In particular, claims 26, 31, and 33 have been rewritten to further clarify the present invention. In addition, new claims 41-54 have been added to recite additional embodiments and are supported as follows:

| <u>Claim(s)</u> | <u>Specification</u> |
|-----------------|--|
| 41 | Page 10, line 31 to Page 11, line 1 Page 8, lines 25-28 |
| 42 | Page 8, lines 25-28 |
| 43 | Page 11, lines 4-7 |
| 44 | Page 8, lines 25-28 |
| 45 | Page 9, lines 10-15 |
| 46 | Page 9, lines 4-6 |
| 47 | Page 11, lines 10-13 |
| 48 | Page 11, lines 13-14 Page 16, lines 3-7 |
| 49 | Page 10, lines 31-35 Page 12, lines 30-33 Page 16, lines 4-7 |
| 50 | Page 8, lines 23-29 |
| 51 | Page 11, lines 4-7 |
| 52 | Page 12, lines 30-32 |
| 53 | Page 9, lines 18-19 |
| 54 | Page 11, lines 13-14 Page 16, lines 3-7 |

As no new matter has been added by the amendments herein, Applicants respectfully request entry of these amendments at this time.

THE REJECTION UNDER 35 U.S.C. § 112

Claim 33 was rejected under 35 U.S.C. § 112 as being indefinite for the reasons stated on page 3 of the Office Action. In response, Applicants have rewritten claim 33 to specify the first

polybutadiene. In addition, claims 26 and 31 have been similarly amended to provide proper antecedent basis (claim 26) and avoid potential § 112 issues in the future (claim 31). In light of the amendments herein, Applicants respectfully submit that the § 112 rejection has been overcome.

THE REJECTIONS UNDER 35 U.S.C. § 102

Rejection Based Upon Cox '145

Claims 26-30 and 32 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,883,145 to Cox *et al.* as set forth on pages 3-4 of the Office Action. Cox does not disclose or even suggest the present invention for at least the reasons that follow.

Cox generally discloses polybutadiene compositions for solid golf balls requiring the cross-linking agent of polyethylene. *See* Col. 5, lines 22-25. Cox does not disclose or suggest, however, the solution blended polymeric composite presently recited. For example, independent claim 26 has been rewritten to clarify that the reinforcing agent is included in the composite in an amount much lower than that taught by Cox. In fact, Cox teaches to use 10-40 parts by weight of silica filler, whereas claim 26 features between 0.1 to 1 weight percent of reinforcing agent. *See* Cox Col. 6, lines 2-7. Thus, Cox does not anticipate the present invention. Furthermore, a skilled artisan would not have been motivated to modify Cox's silica amount to meet the range presently recited because of Cox's instruction that the disclosed amount of silica is necessary to produce the desired compression, hardness, and rebound characteristics. *See* Cox at Col. 6, lines 7-10.

With regard to the Examiner's contention that the solution blend appears to be a method of production, Applicants respectfully submit that the method of solution blending of the present invention produces a product that provides an added benefit over conventionally formed resilient polymer compositions that include reinforcing agents. In further support of this position, Applicants submit a copy of the Declaration of Laurent C. Bissonnette under 37 C.F.R. §1.132 that was filed in the parent application no. 09/923,407 on July 16, 2003 ("the Bissonnette Declaration") to explain the advantages of the solution blended polymeric composite of the present invention as compared to conventionally prepared rubber compositions.

As explained in the Bissonnette Declaration, solution blending results in a final product that is different than a conventionally blended polymer product, such as that disclosed in Cox. In fact, a core formed from a solution blended polymeric composite of the present invention results in a product with a higher COR and a more uniform dispersion. *See, e.g.*, Written Description at Page 9, lines 14-15 and Page 24, lines 1-29.

And, while Cox generally suggests that the rubber used in the composition can be made from 1,3-butadiene by a solution polymerization process (Col. 3, lines 28-30), Cox does not disclose or suggest solution blending to produce a polymeric composite as presently recited. In fact, Cox is completely silent as to the method of mixing the polymers or adding the reinforcing agent to the polymer(s). *See, e.g.*, Cox at Col. 3, lines 28-30 (citing U.S. Patent No. 3,178,402). The conventional method discussed in Cox includes a step of precipitating the individual polymers before combining. *See* U.S. Patent No. 3,178,402 at Col. 5-7. Given the date of Cox's patent (1975) and the citations he provided, it is thus reasonable to infer that Cox's mixtures of polymers and reinforcing agents (1) occurred after precipitation of each material and (2) were not products of solution blending. In addition, a skilled artisan would have had no motivation to use non-conventional methods for forming the disclosed polybutadiene compositions in Cox without the use of improper hindsight.

For at least these reasons, Applicants respectfully submit that Cox does not anticipate or render obvious the present invention. Thus, Applicants respectfully request reconsideration and withdrawal of the rejection based on Cox.

THE REJECTION UNDER 35 U.S.C. §§ 103

Rejection Based Upon Hargis '019

Claim 31 was rejected under 35 U.S.C. § 103(a) as obvious over Cox in view of U.S. Patent No. 3,939,019 to Hargis *et al.* as set forth on page 4 of the Office Action. As explained above, Cox does not disclose or suggest the present invention. Hargis does not remedy the deficiencies of Cox for the subject matter of claim 31 for the following reasons.

Hargis generally discloses a method to produce polymers from monomers using a new catalyst complex in order to form homopolymers or copolymers with a low vinyl content (6-10 percent) and a high *trans*-1,4 polybutadiene structure (80-85 percent). *See, e.g.*, Abstract. The

Examiner rejected claim 31 based on the rationale that one of ordinary skill in the art would modify the polybutadiene used by Cox with Hargis' concepts so as to result in the use of a high *trans*-content polybutadiene. See Page 4 of Office Action. However, Hargis does not teach that polybutadienes with a high *trans*-configuration (80-85 percent) are useful in golf balls, but instead, the high *trans*-content polybutadiene is valued by Hargis because it would not crystallize at room temperature but could undergo crystallization on stretching. See Hargis Col. 6, lines 5-20. One of ordinary skill in the art would not sacrifice the resilient properties achieved through Cox's suggestion of retaining 30 percent of *cis*-configuration in the polybutadiene in order to avoid crystallization at room temperature. See Cox, Col. 3, lines 54-58. Furthermore, considering that the present invention desires the combination of polymers with different characteristics, including ones that possess a high degree of crystallinity at room temperature, a skilled artisan would have no motivation to alter Cox's recommended *cis*-content of polybutadiene. See, e.g., Specification at Page 10, lines 6-9.

As such, Applicants respectfully request that the rejection based upon the combination of Cox and Hargis be reconsidered and withdrawn.

NEW CLAIMS ADDED WITH THIS RESPONSE

Claims 41-54 have been added with this Response. Applicants respectfully submit that these claims are patentable over the cited references for the reasons discussed above. For example, independent claim 41 (and the claims dependent thereon) features a core formed from a "bale" of blended polymeric material comprising of polybutadienes and a reinforcing agent. The advantage of blending the polymer materials into bales of composite material is to avoid the need to provide separate bales of material for combination and to avoid difficulties of conventionally mixing polymers with certain characteristics, *i.e.*, a high *trans*-isomer content. See Written Description at Page 11, lines 2-4. Cox alone, or in combination with Hargis, does not disclose or suggest a golf ball including a bale of two polybutadienes having the *cis*- and *trans*-isomer contents presently recited.

Independent claim 48, and those depending therefrom, also features a core formed from a "bale" of blended polymeric material comprising a polybutadiene of a desired polydispersity prior to crosslinking and a specified content of crosslinking agent. The low polydispersity can

minimize polymeric chain ends in a golf ball compound, which tends to increase resilience, while the crosslinking agent provides additional rigidity to the material to achieve the desired elastic modulus. *See* Written Description at Page 12, lines 30-33 and Page 15, lines 34-35. Similar to claim 41, Cox does not disclose or even suggest a bale of blended polybutadienes with a first polybutadiene having a low polydispersity as presently recited.

As such, Applicants respectfully submit that Cox and Hargis do not anticipate or render obvious the subject matter recited in new claims 41-54.

ATTORNEY DOCKET NUMBER

A Request for Change in Attorney Docket Number is submitted herewith to reflect the change from 20002.0092A to 20002.0400. Applicants respectfully request recognition of this change in future correspondence relating to this application.

CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicants invite the Examiner to contact the undersigned attorneys to discuss any remaining issues. No other fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Swidler Berlin Shereff Friedman, LLP Deposit Account No. 195127, Order No. 20002.0400.

Respectfully submitted,

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